

Hobbies

WEEKLY

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Price Fourpence

Vol. III No. 2884

A SIMPLE HOME-MADE BLANKET CHEST

A VERY necessary and useful article in the home this, for storing bed linen and blankets away when not required in the summer. It is of simplified construction, to present no difficulty to the average woodworker, and the solid wood necessary for it reduced to a

minimum by framing the sides and filling in with composition board or plywood.

The dimensions given are the minimum, and if intended for receiving the surplus bedding for two or more beds could, with advantage, be extended in length by another foot. Do not add to the height or width, if for under-bed use.

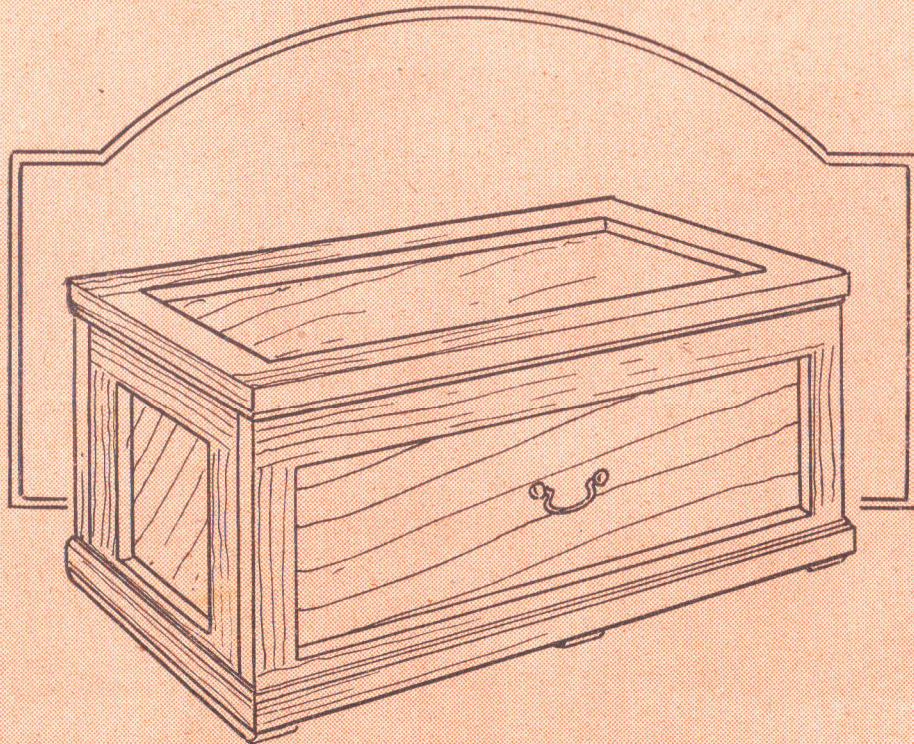
A front and side view of the box frames are shown in Fig. 1, with suggested dimensions. The timber employed can be deal, $\frac{3}{4}$ in. thick and 2 ins. wide. The corner joints for the long sides are of the simple halved kind, known to all readers. Those employed for the ends are similar, but stopped $\frac{1}{2}$ in.

away from the ends, as shown in detail (A) Fig. 2, so that no cut ends appear when the frames are joined up. The view of the joints seen at (A) is from the inside, so is not visible to the view, outside.

The Carcase

Glue and nail these joints together, and when the glue is set hard, plane off any unevenness caused by faulty jointing. Then glue and nail the four frames together to make the carcase of the chest. The plywood or composition board is cut in pieces to fit the interior space. Fit the long sides first, then the ends.

Glue should be added to help the board adhere closely to the woodwork everywhere. A rather generous allowance of glue will be required, and the work of nailing down the board expedited as much as possible, as glue soon chills. About the easiest method is to cut and fit one piece of board at a time. Drive



the nails partly in first, then glue the inside of the frame, lay the board on quickly and nail down with all speed.

When the sides and ends are covered, trim off any surplus above the top edges or below the bottom ones, then similarly nail and glue a bottom of the plywood on, to complete this portion of the work. The detail sketch in Fig. 3 will make the above quite clear.

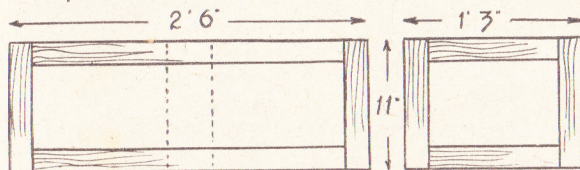


Fig. 1—Front and side view of framework

The top edges of the box now receive a lipping of $\frac{1}{4}$ in. wood, $1\frac{1}{2}$ ins. wide, all along each side and ends, to hide the

CUTTING LIST

Side frames (2)—2ft. 6ins. by 2ins. by $\frac{3}{4}$ in.
Side frames (2)—11ins. by 2ins. by $\frac{3}{4}$ in.
End frames (2)—1ft. 3ins. by 2ins. by $\frac{3}{4}$ in.
End frames (2)—11ins. by 2ins. by $\frac{3}{4}$ in.
Lid (2)—2ft. 6ins. by 2ins. by $\frac{3}{4}$ in.
Lid (2)—1ft. 5ins. by 2ins. by $\frac{3}{4}$ in.
Runners (3)—1ft. 5 $\frac{1}{2}$ ins. by 2ins. by $\frac{3}{4}$ in.
Plinth and lipping— $\frac{1}{4}$ in. by $1\frac{1}{2}$ ins. by 16ft. run.
Lid rim— $\frac{1}{4}$ in. by $1\frac{1}{2}$ ins. by 8ft. run.
Plywood panels (approximate size)
(2)—2ft. 6ins. by 11ins.; (2)—1ft. 3ins. by 11ins.; (2)—2ft. 6ins. by 1ft. 5ins.

ends of the joints and cover the board lining. A plinth of $\frac{1}{4}$ in. by $1\frac{1}{2}$ in. wood is also glued and nailed along the bottom, both these being shown at (B) in Fig. 2. The upper edges of the plinth should be bevelled off, it looks better so, improving the appearance quite a lot.

Now turn the chest over and across the bottom of it screw three battens of wood, one at each end, and one across the centre. These extend the full width, the end edges being bevelled off to look less conspicuous from the front. Glue, as well as screws, can be used here, to make a firm joint.

These battens form runners, and also

help to support the bottom of the chest, which, being plywood or composition, cannot be expected to stand much weight of contents without assistance. Glasspaper the runners smooth.

The chest can, of course, be kept

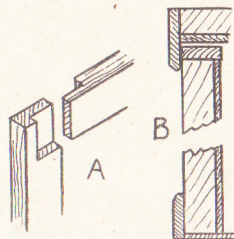


Fig. 2—Detail of joints

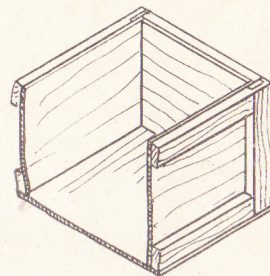


Fig. 3—Cut-away of construction

anywhere, but really it is intended for keeping beneath the bed, and be out of the way. For the latter reason, it will ensure easier running if roller bearings are fitted to the runners.

These can be, or at least used to be, bought at most hardware stores, and easily fitted by chiselling out a suitable recess for them in the wood, the rollers extending above about $\frac{1}{4}$ in. In the absence of these, a pair of steel furniture domes to each runner, as in Fig. 4, will be a good substitute. In either case it will be advisable to fit these to the runners before screwing the latter to the chest.

Lid

A lid for the chest can be made of framed up wood, as for the rest. Make it the same dimensions, rather on the full size, and cover on the inside with the plywood board. To the edges of this glue and nail a $\frac{1}{4}$ in. by $1\frac{1}{2}$ in. rim all round, as seen in detail (B) Fig. 2. Bevel the bottom outside edges of this to match the plinth below.

No need to hinge the lid, it is quite as efficient as a 'lift off' one, but let the fit be reasonably close to exclude dust and moths. A neater job will result if the corner joints of plinth, rim, and lipping are nicely mitred.

A simple metal handle is an advantage for ease in pulling the chest from under the bed. This could be just screwed to the framing, at top or bottom, but a

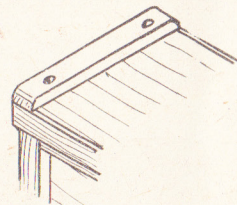


Fig. 4—Domes under rails

centre fitting looks much neater and more symmetrical, undoubtedly. Some strain comes on the handle though, and the plywood should be strengthened against this by adding a strip of wood to the inside of the chest into which the screws of the handle can get a better hold.

A strip, wide enough, of course, should extend the full depth of the chest inside, as indicated by the dotted lines in Fig. 1, and be nailed to the framing at both ends, any strain on the plywood will then be cancelled out, the handle strip taking the lot.

The completed chest can be stained a nice oak colour, about the best choice, and varnished. It may be added, that if the chest is not intended for under-bed use, then its depth can be increased moderately, to hold more bed clothes if thought desirable.

Table Lamp—(Continued from page 291)

parts should next be threaded through the terminals at the bottom of the lamp-holder proper until the rubber covered parts are against the terminals and then secured by the set screws. The surplus bare wire is then trimmed off, taking care that no loose bits fall into the base.

Wiring

The lampholder should be given one or two twists (only) to shorten the wire and the base (not the upper part) should then be turned until the connecting thread engages and the two parts become one. This procedure avoids too great a twist on the wires and has the effect of drawing the upper part into the lower. The complete fitment should then be screwed down on to (D).

The usual flex should now be connected to the wires coming through (G); the wires could be soldered to make a really good job. The bare parts should,

of course, be protected by one or two layers of insulation tape.

No specific instructions have been given regarding the switch or mains plug. The latter will depend upon the type of socket available. The switch could be of the small elliptical type obtainable in various colours, and incorporated in the flex close to the base (G) of the lamp, or the base itself could be adapted to take the small button type of switch used in commercial lamps. The shade is outside the scope of this article.

Variation

As already hinted, the present design can be varied. Using the same procedure for wiring there is no reason why the frame should not be elliptical or octagonal rather than circular, to quote but two examples. The base need not be circular, but should, nevertheless, afford proper support for the upper work.

The construction can also be modified to take a standard size lampholder with incorporated switch but the overall dimensions will have to be larger, or a top heavy effect will result.

Different Models

The space within the 'ring' could be filled in with a simple design which would add strength to the main structure. If this is done the design should be sketched out at the beginning (not forgetting the necessary 'tie-pieces' to the main frame) and cut out in triplicate as before.

Some half-dozen different models have been made by the writer, but the simplest is probably the best and more than one observer has been puzzled by the effect of a 'solid' wood ring affording no apparent connection between the lamp and supply flex.

(282)

An attractive and mystifying electrical NOVEL TABLE LAMP

THE essential tool for this job is a fret-saw. Plywood would be admirable material, but in view of its comparative scarcity nowadays, it may be necessary to build up the required thicknesses by using layers of thinner stuff, the grain of each piece running the opposite way to the next. In brief, we make our own plywood.

The design is shown in its most simple form, but can be elaborated in various ways if so desired. Some of these are touched upon briefly at the end of this article. The dimensions shown in the diagrams are taken from an actual

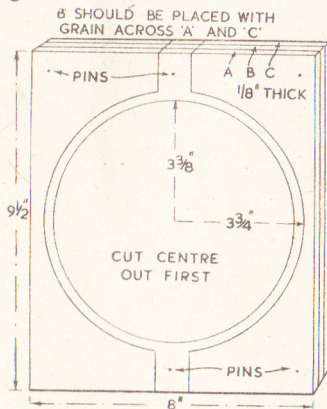


Fig. 1—Marking the boards

model, but could be varied slightly. Too much variation would, however, spoil the balance.

Construction

The pieces (A), (B) and (C) are pinned together temporarily and the shape at Fig. 1 cut out. They are then separated and marked so they can be re-assembled later in exactly the same positions.

Next, piece (B) (only) is cut further, as at Fig. 2, and glued and pinned on to (C) in its original position. When set the extension pieces of the tabs marked

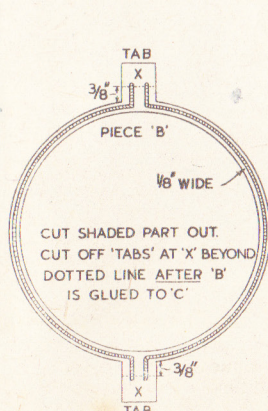


Fig. 2—The second layer

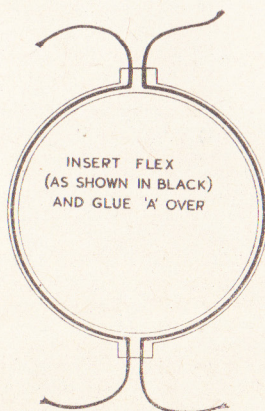


Fig. 3—Flex in place

(x) should be trimmed off. We have now produced grooves each $\frac{1}{8}$ in. wide and deep, in which the internal wiring will be placed.

From some good quality lighting flex cut off about 2ft. and strip it of its outer covering (only), taking care not to damage the separate rubber-covered wires within. The latter are now placed in the grooves (Fig. 3) leaving about 6ins. trailing at each end for future connections. The wires should be down nicely with a small clearance at the sides and top of the grooves.

Piece (A) is now trimmed off at the tabs to correspond with (B) and (C) and then glued and pinned permanently to (B) over the wiring, bearing in mind that only $\frac{1}{8}$ in. is available either side of the grooves. When set, this part of the job should be cleaned up.

Building

The next job is the cutting of (D), (E), (F) and (G) (Fig. 4). It is essential that (D) and (E), at least, should be made of thick ply or built up as mentioned above. The slots of these two should be made very slightly smaller than the dimensions shown. They are to fit over the tabs and the latter can be slightly glasspapered until a perfect fit is assured.

The slots in (D) and (E) should then be given a very thin film of glue and the pieces pressed firmly and squarely home (Fig. 5). Piece (F) is glued and secured to (E) by screwing from underneath. (G) is similarly affixed to (F) after fixing the 'button' feet on the former. The wires are, of course, threaded through as the attachments are made.

Cleaning

All these parts should be cleaned up, and in fact, can be stained and polished or painted before assembly, if desired. The same applies to the 'ring'. A final touch up will probably be required when the whole job is finished.

The actual polishing or painting is a matter of individual taste. The present writer has stained and polished the 'ring' a dark walnut, (D) and (E) ebony, (F) dark walnut again and (G) (the main base) ebony.

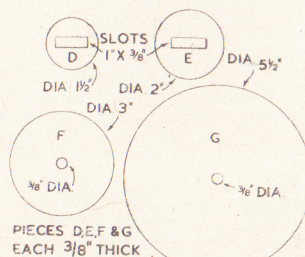
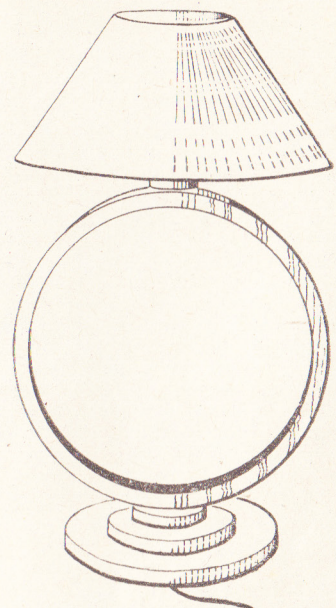


Fig. 4—Bare parts



Another effective model has been made in cream and black enamel, which completely hides the various edges.

Electrical Parts

We now come to the actual electrical parts. The lampholder is of the sub-standard (small) batten type to take a so-called candle lamp. The latter is of the small conical type made for domestic voltages. Both fittings are obtainable from any reputable electrical dealer at reasonable cost.

As is usual, the holder is in two parts, one screwing into the other. The base should be detached and placed (but not screwed) on (D) bringing the wires through. The wires should then be marked at a point approximately $\frac{1}{4}$ in. above the top edge of the base, and the wires stripped of their covering from that point to their ends. The stripped

(Continued foot of page 290)

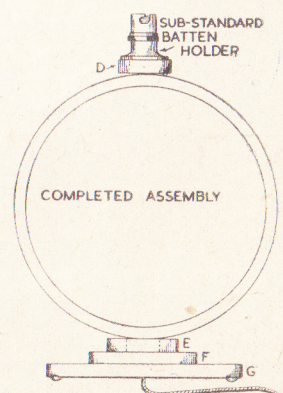


Fig. 5—The whole assembly

How the home carpenter and gardener can make a handy GARDEN-SEAT TOOL BOX

HERE is something without which no garden away from a house is complete. Almost all the allotments in this country are in use these days, but unless the amateur gardener owns a greenhouse or can afford a shed, he usually lacks a place to keep his garden tools. Carrying them from the house and back again each time is irksome—and a good enough reason for making a tool box.

Also, unless there is a garden seat on which he and his helpers may sit in the sun and chat, or rest, he has not known the full pleasure of gardening.

This design, then, fills both these needs, and has the added advantage that it may be pre-fabricated at home in a short time and taken up to the garden in sections which are easier to handle than the finished article, and which only require hammer and screwdriver on the actual site.

Size of Box

The box itself is 3ft. 6ins. long by 2ft. square. This size is ample to contain spades, forks, small bags of fertilizer and lime, and insecticides. For tools with long handles, suitable holes may be bored in one end and the handles pushed through. The metal end is kept perfectly dry inside the box, and the part of the handle which is outside will not come to much harm, for it is well clear of the ground and rain soon drips off it. The truth of this will be seen from the photograph of a finished 'Garden-

roll of roofing felt, a pair of hinges and a padlock fastening.

Construction details:

Back. Planks ($\frac{1}{2}$ in. to 1in. thick), 3 $\frac{1}{2}$ ft. long, and to a total width of 2ft. A single plank, any width, about 3 $\frac{1}{2}$ ft. long, for the seat back. Two lengths of wood about 2ins. square (or suitable metal bars) 4ft. long. Nail box planks squarely to one end of square wood and seat back across other end.

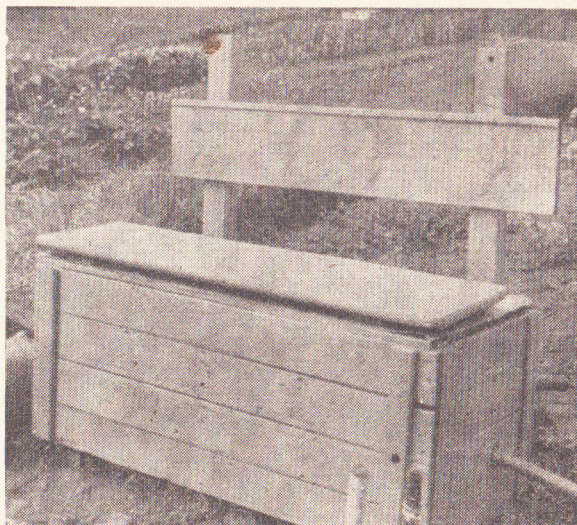
Front. Planks (same size as above and also to a total width of 2ft.). Two battens 2ft. long (any reasonable width and thickness) to fasten planks together.

Top. Planks (as above). Two battens as above. Roofing felt 2ft. wide by 3 $\frac{1}{2}$ ft. long to be fitted under battens. A single piece of well-finished wood (as in photograph) or several narrower pieces nailed evenly across battens for seat.

Bottom. Planks (as above). Two lengths of wood about 2ins. square and 2ft. long to be nailed on as battens and to form a firm base to keep the box off the soil.

Ends. Short planks 1ft. 11ins. long to a width of 2ft., and two battens, as above for each end.

To move to the garden from the home, these sections may be tied together, putting the small ends between two of the larger sections, and so taken to the site for assembly. If no other transport is available, they may be rested on one pedal of a bicycle, secured to the frame and so wheeled along.



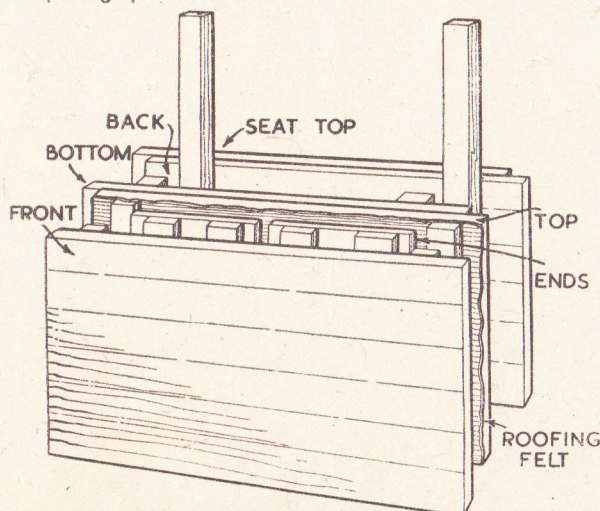
The assembly is simple. The back, front and bottom are nailed on outside the ends. The remainder of the roofing felt should be used to line the sides of the box. The bottom is best not lined, for should any water work its way in, it will then drain out and not remain to rust the tools. The top should be fastened to the box by the hinges at one end, so that long tools may be easily withdrawn, and the fastening to the other end.

A length of strong string or thin rope to prevent the top from going completely over is an advantage.

In Position

Before putting the 'Garden-seat' Tool Box in its final position, the ground should, of course, be trampled hard and bricks or stones used, if available, as a firm dry base for the thick bottom battens.

For your own garden, or as a present to a friend, or as a profitable sale to an acquaintance with an allotment, this design should be found ideal. (329)



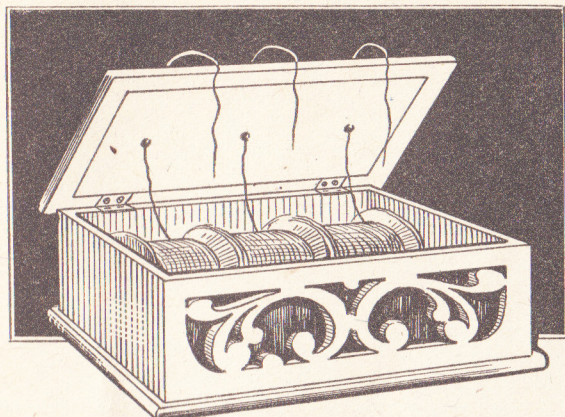
Showing most of the pre-fabricated parts and how they are packed for carrying to the site for erection

seat' Tool Box.

Materials needed do not have to be expensive. Rough-finished or second-hand wood is quite good enough for all except the seat, and, apart from nails, the only other requirements are part of a

SUMMARY OF WOOD SIZES, ETC.
Planks—3 $\frac{1}{2}$ ft. long with a total width of 8ft. (for box bottom, top and sides).
Planks—1ft. 10ins. long, with a total width of 4ft. (for box ends).
Planks—3 $\frac{1}{2}$ ft. long of any reasonable width (for seat back).
8 battens, of any width and thickness strong enough to make a rigid job, not less than $\frac{1}{2}$ in. by 3ins., and each 2ft. long.
2 bars of wood about 2ins. square and 4ft. long (for seat back).
2 bars of wood about 2ins. square and 2ft. long (for base rests).
1 plank of smooth wood, 3 $\frac{1}{2}$ ft. by about 1 $\frac{1}{2}$ ft., or several narrower planks (for seat top).
Roofing felt—3 $\frac{1}{2}$ by 2ft. (for top), and about 22 square feet (for lining sides).
Note—Ironmongers will usually sell part of a roll and, as rolls are normally 3ft. wide, 4yds. of felt is ample.

Patterns on page 303 for this handy BOX FOR COTTON REELS



WE are able to give this week full-size patterns for the making of the useful and novel box shown here on this page. It is a box to hold three reels of cotton or silk, and its usefulness lies in the fact that as a length is wanted, it can be drawn direct through holes in the lid. This makes for ease in measuring off, and the cotton or silk is not handled, therefore, it is always clean and ready when wanted.

The box is designed to hold three reels, but, of course, by extending its length it can be made to hold four reels or more as desired. Such an article as this would make an ideal gift for a lady.

The fretworker, we feel sure, will be pleased with this design, especially in view of the fact that all the fretted parts are given full size and any drawing out in enlarging the design or tracing out is, therefore, obviated.

Patterns

It will be seen from the patterns on cover III of this issue that the floor and the lid are the same size. So, having stuck down the pattern of the lid, all the fretted parts can be cut and the outline also.

Then, when the outer edges have been cleaned up and slightly rounded off to give a neater appearance, this cut-out may be laid on another piece of $\frac{3}{8}$ in. wood and a line drawn round in pencil.

After this has been cut round, the process of cleaning and shaping is repeated, and the whole top surface made smooth, ready for building and gluing on the sides and ends.

The sheet includes both the sides, as they contain a definite fretcut panel and, therefore, no duplication of the design is necessary. So the work is really straightforward.

Each side may be cut independently, which is beneficial where small frets and interior points and corners occur.

Use a fine fretsaw for all the cutting, and take care in cleaning off the paper pattern not to break off any of the more or less fragile parts of the design.

Always use a large-surface glasspaper block, and bear in mind always to rub in the direction of the grain of the wood and never cross ways.

End Parts

The ends of the box are plain pieces, and the outline of one is given full-size on the pattern sheet. Instead of pasting down this pattern, it is only necessary to lay it on the piece of wood selected and prick in each corner lightly.

Now connect up these points with a firm pencil line and cut round with the fretsaw. By doing this the task of cleaning off the paper pattern is obviated.

The second end of the box may be outlined by drawing a line round that part already cut out.

The matter of gluing the four parts is simple. After lightly pricking in the positions of the ends and sides on to the ends and sides on to the floor piece—as seen in the dotted lines on the pattern of the lid—draw in faint pencil lines as a guide for the gluing down.

Apply a thin coat of glue to the lower edge of one of the sides and put this in place on the floor, pressing it down

gently until it stands upright on its own. Now take each end in turn, apply glue as before and put some also on one of the upright edges.

Put these in place on the floor and press them carefully to it and to the extreme ends of the already-erected side. The other long side is finally added, making quite sure that the vertical surfaces are all flush.

The box should now be laid aside until the glue has thoroughly hardened. As the box may at times be subject to much handling, it would be advisable to drive in one or two screws through into the sides and ends. The holes must be bored for these screws as a precaution against splitting the wood.

Overlays

The three circular overlays are next cut round and holes either drilled or cut in the centre for the passage of the cotton or silk. Glue these discs on over the holes in the centre of the lid and according to the dotted lines on the pattern.

It only remains to hinge the lid to the box. First screw the hinges to the lid, keeping them $\frac{1}{8}$ in. in from the back edge and about $\frac{1}{2}$ in. from the end. The positions can be judged from the sketch of the open box. Now lay the lid in place on the box and mark where the knuckles come on the top edge of the back.

Cut down shallow recesses sufficiently deep to take both flaps of the hinges. Test for depth again before finally putting in the screws, holes for which must be previously bored.

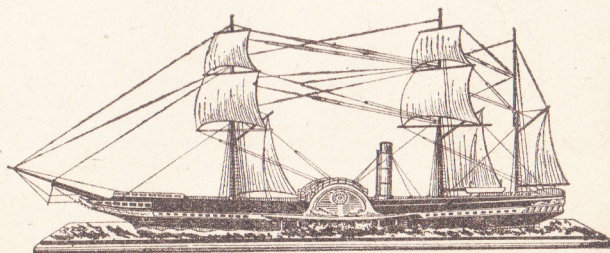
Lining

If it is desired, a coloured lining paper or even silk may be stuck behind the frets of the front, back and lid. If a more substantial job is required, thin pieces of stained wood would make for a better finish.

All the outside surfaces of the box may be polished if a dark wood like mahogany has been used, but if of oak, then a light stain should be applied with a rubbing of wax or oil as the finish. One of Hobbies H3 panels of wood ($\frac{3}{8}$ in. thick) is large enough for cutting all the parts of the design.

A Waterline Model of R.M.S. BRITANNIA

Hundreds of readers have made this attractive model from Design No. 239 Special. Only 18 ins. long, but what a marvellous exhibition piece it makes! The R.M.S. Britannia was one of the early steam-cum-sailing ships—built in 1840—to carry mails across the Atlantic. She was but 207 ft. long with displacement of 2050 tons. She carried 115 saloon passengers. Designs are still obtainable from Hobbies.



Problems solved and attractive results in this MODEL RAILWAY LAYOUT

WHEN a Model layout has been installed in a room, the most difficult problem often becomes that of what to do with the corners and chimney-breast alcoves. If not treated correctly, these are apt to be space-wasters, and as such are not very popular with the enthusiast, whose available area is usually very limited, anyway.

If Fig. 1 is studied, it will be seen that a siding road (A-B-C) can be suitably run right into the corner and thus allow wagons or coaching-stock to be stored well away from the station beyond (C).

It will be noticed that the entry to the siding is via a trailing point (E), and that a trailing crossover (D) is fitted at the end

wherein the straight siding (A-B-C) is supplemented by two more curved roads, both of which leave the latter by means of simple left-hand turnouts (D) and (E). As the radius of these two siding roads can be considerably less than that of the main-lines, a short length of straight track can often be inserted between (D) and (E).

With a view of using simple points it is suggested that the point at (F) takes the form of a left-hand turnout joining up with a right-hand one at (B) Fig. 3; the curved point of (F) forming the entry into the main-line curve.

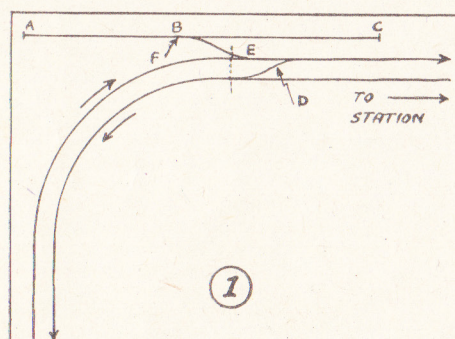
The trailing crossover (G) can well be positioned at the extreme end of the straight part of the main-line, and can then be formed by two left-hand turn-

be the wasted corner area, and vice versa, but even with small radius tracks, sufficient room can usually be found for at least one siding road without encroaching too much on the main-lines.

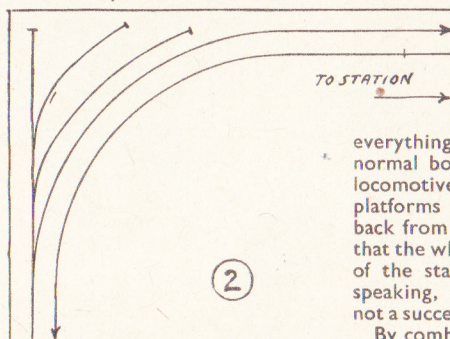
If the introduction of additional track is out of the question when it comes to 'filling the corners', then the judicious introduction of a signal-box at the correct distance from the main-lines is the next best thing. With a view of improving the appearance of the waste ground, however, it is a good plan to build up behind the signal-box a 'hill' of rough lathing and sized brown-paper, 'cutting out' a site in which the box will easily fit (X) Fig. 3.

Unless your main-line curves are of at least 4ft. 6ins. radius, do not toy with the idea of putting a station in a corner. On a model of a very small 'single-line' railway, where tank engines and very short four-wheeled coaches are used, everything will be satisfactory; but if normal bogie coaches and express type locomotives are the order of the day, the platforms will have to be placed so far back from the rails to clear the vehicles that the whole 'rightness' and appearance of the station will be spoilt. Broadly speaking, stations built on curves are not a success.

By combining the lessons learnt it will



①



②

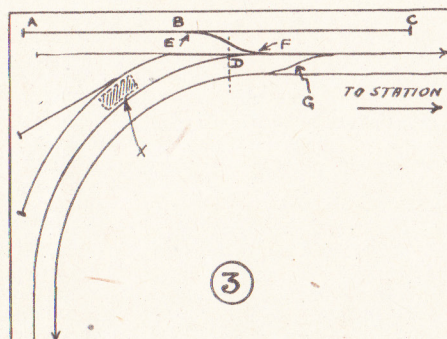
of the straight main-line run to enable vehicles to be shunted from the 'up' to the 'down' main-line before entering the siding.

This method of entering a siding is important, and in Fig. 2 is shown the way not to arrange the tracks. In this case the point (A) is a facing one, and the siding is entered direct, instead of first approaching on a shunting road (A-B-C) in Fig. 1.

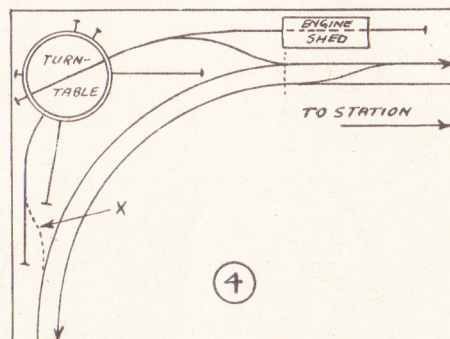
Returning to Fig. 1 for a moment. It must be observed that the length of the shunting road (A-B-C) must be equal to twice the length of the locomotive and train using the siding, and that the length (A-B) must also be equal to (B-C); so that the engine can clear the points at (F) should a fast train desire to pass on the main line; for the points (E) and (F) would be operated together for safety's sake.

In a siding layout as shown, vehicles could not be worked by engine power up to the buffers at (C) unless there was room for the engine and stock to draw right up to the buffers at (A). For this movement the loco would pull its train into the siding, whereas if stock was to be left between (A) and (B), it should push it in.

In Fig. 3 is shown a variation of Fig. 1



③



④

outs. The crossover can be placed as near up to the station (further left) as possible without bringing it within the station platforms; which is not good practice.

Another method of utilising corner space is by arranging the loco department there, placing the turntable as close into the corner as possible. In this case two or more siding roads can be run direct from the turntable, as shown in Fig. 4, thus utilising practically all the available corner space.

In modelling Fig. 4, do not fall into the inviting trap of putting in a facing entry road at (X), for this would be very definitely wrong.

It will be realised that the smaller the radius of the main-lines, the smaller will

be found quite easy to design a small loco department to fit into a 6ft. long chimney-breast recess. The great thing to bear in mind—whatever the plan, is never to allow entry by any other than a trailing point, and to always try to arrange a shunting 'spur' if width permits.

In all such matters it may seem trivial to worry about such apparently little things, but in the writer's experience many an otherwise well-designed model railway has been marred by such things as would never be tolerated in real railway practice. The more like the 'real thing' we modellers can get, the greater pride we can justifiably have in our model line; which is then a true Model Railway. Attention to details always pays good dividends.

Turn the handle for delivery in this novel AUTOMATIC TEA CADDY

DURING the thousand years that tea caddies have been in use a very wide range of designs have been made. The very earliest caddies were made of porcelain by the Chinese, who were drinking tea as far back as the 6th century. These early caddies were followed by metal ones of brass, pewter and then silver; some of which were very ornamental and extremely beautiful.

Wooden caddies were of a later date and have attracted the attention of many famous craftsmen. Both Chippendale and Hepplewhite made a large number of very attractive caddies, chiefly in mahogany.

The automatic tea caddy described on this page is quite a different article from the masterpieces of these craftsmen and is more suited to present day needs. By turning the handle on the side a certain number of times the correct amount of tea is measured out to suit the number of people to tea, and is delivered into a tray beneath, ready to be tipped into the teapot.

The actual working can be easily understood by studying Figs. 1 and 2. The top chamber, which will hold a whole packet of tea, is tapered at the bottom where it is a tight fit with the roller. A hollow is cut in this roller sufficient to hold a teaspoonful of tea.

By turning the handle of the roller round once, a spoonful of tea is emptied into the tray beneath, two turns will give two spoonfuls and so on. When the required amount is delivered, the tray is removed and emptied into the teapot.

Commence by making the outer case of the caddy—four sides and the base. Two sides are cut 6ins. long and taper from 3½ins. wide at the top to 2½ins. wide at the base. The back piece is 6ins. long and tapers from 4ins. at the top to 3ins. at the base. In cutting the front, allowance must be made for the tray opening at the base, the length

will, therefore, be only 5ins., but the other measurements will be the same.

The base is 4ins. square with a thickness of ½in., which is the same for all the case woodwork. The plainness can be taken off the base by chamfering the edges, by putting a moulding round, or even carving the edges.

At this stage three of the sides can be fitted to the base—the back is left off until last, so as to enable the inside works to be fitted and adjusted. Carefully glue up, using a small number of panel pins to give extra strength if thought necessary. When using panel pins they should be punched right in and the holes filled with a wood filler to match the woodwork.

The roller for measuring out the tea should now be made and fitted. A piece of circular wood 1in. diameter and 3ins. long, such as dowel rod or a piece of broom handle will do for this.

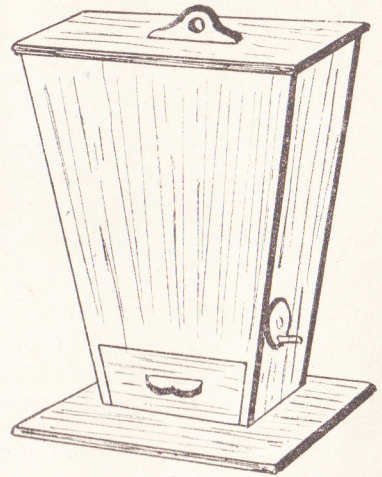
Reference to Figs. 1 and 2 will show that a depression has been cut out just large enough to hold one teaspoonful of tea. The easiest way of doing this is with a gouge, afterwards making the whole quite smooth with glasspaper.

The exact position for the roller is not important, but it is best put low down near the tray and rather to the front, as shown in the sketches. Be very careful when drilling the pivot holes in the roller to get them exactly central.

As the roller is not required to do any heavy work, ½in. diameter dowel rod will do well for the pivots. The handle end should project outside the case about ½in., while the other end is cut off flush with the case.

If the pivots are made a tight fit it will not be necessary to glue them in, but that you must decide for yourself. A small washer on each end of the pivot between the roller and the inside of the case may be needed to eliminate side play to the roller.

The handle, consisting of a 1in.



diameter disc of wood with a piece of ½in. dowel rod glued in near its edge, can now be fitted in position. It is best for the handle to be at the bottom when the cavity in the roller is at the top.

The bottom part of the tea compartment must now receive our attention. Its object is to direct the tea in to the roller cavity. Quite thin plywood will do for this purpose, and Figs. 1 and 2 give a good idea of the shape and positions for the four pieces. The bottom edges should just touch the roller so that there are no gaps for the tea to trickle through.

Having got this part well glued up and made sure that the joints are tight, the back can be fitted on. The tray can now be made to fit in the bottom of the case. It is best to cut a piece of plywood 2½ins. square and about ½in. thick to fit exactly into the base and then to build the sides around it.

First cut the front to fit the hole left at the base of the case 1in. wide, ½in. thick and just over 2½ins. long. Fig. 3 clearly shows the positions for the other parts—the gap at the back of the tray is about ½in. wide to enable the tea to be emptied into the teapot without spilling.

As the case gets smaller towards the bottom, so also must the sides of the tray slope off at the same angle. This however, is only slight and will not make the job too difficult.

A well fitted lid will complete the job. and for this cut a piece of wood 4½ins. square and round off the edges. A ½in. square fillet glued neatly round the inside will make the lid a nice fit. Cut a handle from a 2in. length of ½in. by ½in. wood and glue in position. A slightly smaller one is also needed for the tray front.

After well glasspapering, a finish in keeping with the article can be given with either french polish or a wax polish. (338)

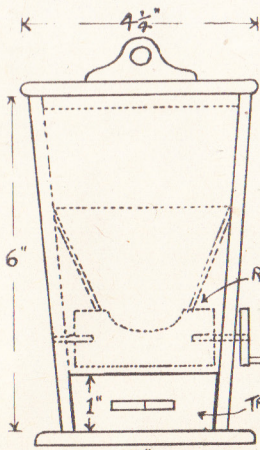


Fig. 1—Front section

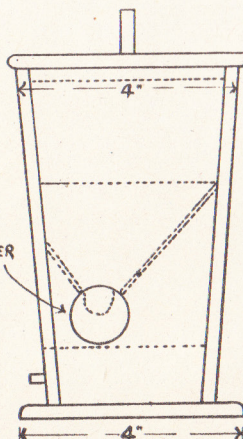


Fig. 2—Side section

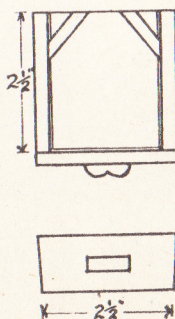


Fig. 3—Tray details

Your home can be much improved by sensible FURNITURE PLANNING

NOW that hardboard is available in quantities and without licence, many may be interested in making themselves some new furniture units. Once you have acquired the habit, you will want to go on with more elaborate schemes. Sufficient light quarterings are now to be had and this is all you need, apart from beadings.

Large sheets of plywood also are advertised at regular intervals and this could be used for facing surfaces, although hardboard does have one very attractive side.

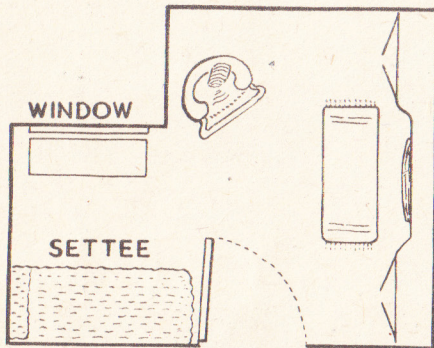


Fig. 1—A practical plan of a room

Here, as in most crafts, get down to a little planning on the kitchen table at a quiet moment. Buy yourself some graph paper at the local stationers and on this you will be able to sketch out your designs and see exactly what they look like.

Take into consideration the shape of the room. So often you may have a recess or an obstruction and also the position of the door and the fireplace, apart from the window. As a simple

compact, yet useful space allowed, especially at the small end.

As a further help you could draw the room out in Bristol board with a scale of 1ft. to 1in. With this as a guide you could then fit in your units, taking the idea of the measurements from existing sets of furniture.

Even if you yourself do not carry out the actual making, these items of measurement and trial and error will be most helpful to the carpenter or whoever you intend asking. You will not be up against the problem of the carpenter not being quite clear about various points.

In Fig. 2 you will see how the fitment is designed to fix in that particular corner which is near and quite close to the window. That drop in the design makes just that little difference in the appearance of the room.

Next, remember if the unit is to be fixed in or removable. This alters the construction considerably. If it is a fixture, then allow space for cleaning around the sides. You will also need to make it much stronger and able to take more strain.

Space permitting, you may be wanting to make a series of built-in shelves and cupboards around the existing fireplace and you will note that the shelves are kept low and the two cupboards a little under the height of the fireplace. In keeping with this trend the door handles are of the flush type in a neutral colour and fairly long. Any other type would be out of place; in Fig. 3 you will see how this can look.

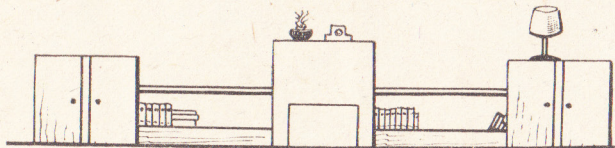


Fig. 3—Fireplace, low shelves and cabinets

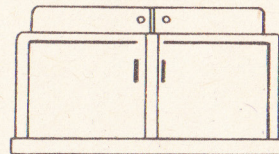


Fig. 4—Solid Basework

guide the sketch at Fig. 1 will give you a good idea of this lay-out. Note the

Your squared paper can be most useful if you decide how many inches you

wish each square to represent. When decided, make a note of it at the top of the paper.

Here are some tips before designing other units. The base of the furniture should always be the same width as the top, otherwise a top-heavy effect is obtained. In the case of use of colour, if you are using two colours, keep the darker shade for the base.

Any furniture must conform to some limits in width and you will find that 16ins. to 18ins. is quite deep enough for built-in parts. A little more space can be used for removable items. The idea of

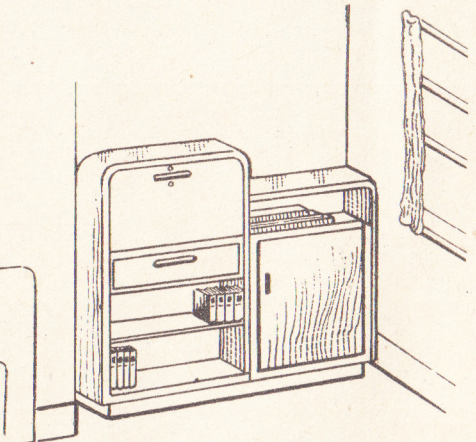


Fig. 2—A corner fitment

building up from the bottom is a good plan and does away with the chance of that top-heavy look. This is shown in Fig. 4. Handles look best if placed one-third from the top of the cupboard. If your design is right, this should be a convenient height.

Last but not least, what about the position of shelves? Plan first exactly what is going to be kept in the cupboard or unit. Shelves can be too deep; they can be too close or too narrow. It is also a good plan to make them easy in fit so they can be adjusted at any time should you decide to use the space for something else. (233)

Print Drying—(Continued from page 297)

With batten holders these holes need only be large enough to take the cable, but with shade holders the circular openings will have to be sufficiently large to take the full metal cylinder, and it greatly helps firmness of the lamps if the holes are taken out carefully so as to just exactly take the metal which has to be slightly forced (or even screwed) into position. The collars then make the already tight fitting more secure still.

When drying prints naturally—and let it be repeated that all types of paper (bar

glossy), i.e. matt, semi-matt, velvet, etc. must be so dried—it is good to first take off the surplus moisture by pressing for a moment between two sheets of blotting paper.

The blotting books one can buy are good for this. The book dries out between successive batches of prints and is never used up. The idea of drying off surplus moisture is to help the even drying of the prints which, as we have said, is of the utmost importance.

MOBILE CRANE MODEL DESIGN

This week's design is for a model of an attractive and unusual crane. The materials for building (No. 2884) are obtainable from Hobbies Branches for 6/1 or 6/11 post free from Hobbies Ltd., Dereham, Norfolk.

Practical advice for the amateur photographer— PRINT DRYING HINTS

THE main point about drying all photographic prints is that they must lose their moisture evenly.

Any quick, patchy drying, which hardens off some parts while others are still wet, tends to cause the paper to warp and buckle—sometimes to such an extent that it cannot again be straightened out. Uniform drying, therefore, is essential.

There are two major classes of printing paper—glossy and matt—though there are numerous varieties in each. Both can be dried 'naturally' but the glossy kind can be given an extra high glaze by drying on a smooth plate of one sort or another. The process of 'glazing', as it is called, has been dealt with recently, so we will keep here to the methods by which prints can be assisted in natural drying.

Not Blotting Paper

Laying out on sheets of clean blotting paper is often suggested, but this has disadvantages. The paper below the prints gets very damp and makes complete drying out a slow business, while patchily damp blotting paper will itself cockle to some extent and therefore does not help in the final flatness of the pictures.

Hanging by one corner also is not too

could be given more room around, which would all be to the good.

Lengths of $1\frac{1}{2}$ ins. by $\frac{3}{4}$ in. wood are used for the side strips (a) and (b) and the corners are reinforced with the small triangular piece (d). A simple dovetail helps to make the corners firm, but is not essential, and the lengths can be just overlapped. Upon this frame the gauze or butter muslin is stretched, and to give tightness it is taken down and under, the lengths being secured on the inside by a series of drawing pins.

Turning Over

When the prints have been laid out (face up) on the material—care being taken to see that they do not overlap—the frame is put horizontally on some airy place so that a draught can get up from below, the supports, whatever they are, touching the wood only, the gauze being quite free.

It is a good idea to turn the prints over when nearly dry as this helps flatness—the gauze or muslin of course being kept

excellent thing to have a heat drier, the heat being supplied by two electric bulbs encased in a container as Fig. 2. First required is the gauze-covered frame (A) which in general is the same as the one just described. In this case, however, a convenient size is 12 ins. by 18 ins., which means that it will hold three rows of seven each of $3\frac{1}{4}$ in. by $2\frac{1}{4}$ in. prints at any one time.

There can be no inside corner-pieces with this frame as it has to slip over the top of the box lamp-container, so it is strengthened by four small angle irons (p) on the outside. As before, the gauze or butter muslin is stretched over the top and taken round under each member and secured again by a series of drawing pins pushed well home.

The Container

The container (B) is a simple box of 17 ins. by 11 ins. base, 17 ins. by 6 ins. side and ends to fit. The quickest way to assemble strongly is to attach ends and side to the triangular pieces (t). The base

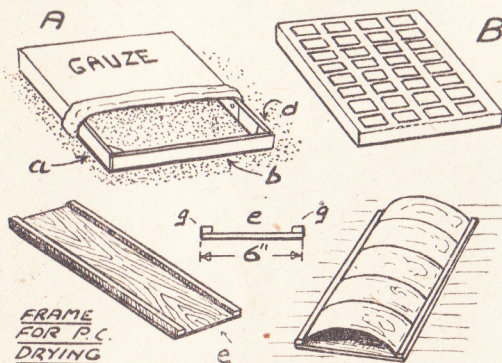


Fig. 1—Frames and materials

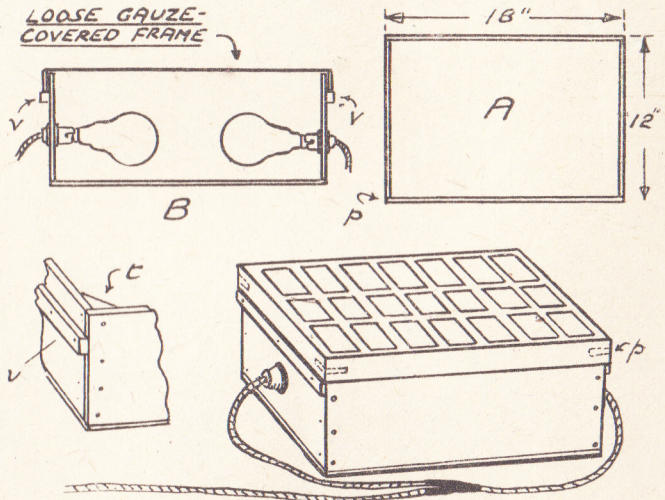


Fig. 2—An electric lamp container

good as, except in the case of big enlargements, the prints develop a diagonal curl which is particularly hard to eliminate, while the top corner is always marked by the clip or peg.

The ideal condition is to get air, either warmed or at usual room temperature, all round the prints as they lie in a horizontal position and to this end fine gauze or butter muslin is a great help. This is stretched over a simple frame as (A) in Fig. 1, and the prints are laid out to dry on the taut material, as (B).

A Handy Frame

The frame shown is 16 ins. by 21 ins.—this size being handy, as it allows of four rows of $3\frac{1}{4}$ in. by $2\frac{1}{4}$ in. prints with eight prints to a row, having about a $\frac{1}{4}$ in. space between each. A less number of prints

entirely clear of dust.

Postcards drying naturally tend to acquire a bad curve which is due to the stiffness of the material and is very difficult to get out. Curling can be prevented, however, by using the frame shown in the lower sketches of Fig. 1. This is a length of board (e), 6 ins. wide and $17\frac{1}{2}$ ins. long which is supplied with the lips (g)—two thin strips of $\frac{1}{4}$ in. wide wood.

The postcards are partially dried on the gauze and then transferred to the frame, being clipped face up between the lips as indicated, when it will be found they dry right out with just the slightest backward bend—which is an advantage, as all prints in time tend to come forward.

To hasten 'natural' drying it is an

then is screwed to the end of these. Perfect safety from fire and a greater heat-conserving property is given if the inside of the box is lined with thin asbestos. Fit also the two strips (v), $1\frac{1}{2}$ ins. down at each end for the frame to rest on. These are 12 ins. by $\frac{1}{4}$ in. by $\frac{1}{4}$ in.

Fitting the Lamps

Having got the gauze frame and box finished, lastly fit the lamps. Batten holders can be used for these with advantage. If ordinary shade holders are employed the shade collars are used to secure the holder tightly in the wood. The lamps are nearer the bottom of the container than the top to help better diffuse the heat, so the holes for these are bored $2\frac{1}{2}$ ins. from the base.

(Continued foot of page 296)

Some more interesting experiments in our series of HOME CHEMISTRY

AS every amateur photographer knows, 'hypo' or sodium thiosulphate is indispensable for removing unaltered silver chloride or bromide. It is, however, not only the photographer, nor even the analytical chemist, who finds it so useful, for in several industries it is a valuable aid, such as in bleaching, candle making, dyeing, ink making and in the leather industry. In many chemical researches, too, the modest hypo has been a vital factor in the discovery of new substances.

A First Proof

But one substance with which sodium thiosulphate could help still eludes the scientist, and that is the parent acid itself, thiosulphuric acid. When we consider how many other acids may be prepared by acting on their salts with a mineral acid it seems reasonable to hope that thiosulphuric acid could be prepared similarly. Such is not the case, as you may prove by the first experiment.

Make a fresh solution of sodium thiosulphate (for an old one is usually partly decomposed). Add to it dilute hydrochloric acid. The solution remains clear and chemists believe thiosulphuric acid to be present at this stage. But in a few seconds an opalescence appears.

This increases to a turbidity and finally a precipitate of sulphur is formed. Smell the liquid. The acrid odour of sulphur dioxide will be noted. It is believed that the acid quickly splits up into water, sulphur dioxide and sulphur. An interesting fact is that so unstable an acid can form such a stable salt as sodium thiosulphate.

The Use of Salt

The principle behind the photographic use of the salt is easily demonstrated as one of solution. Make a little silver chloride by mixing silver nitrate and sodium chloride. Wash the curdy white precipitate of silver chloride once or twice by decantation and add sodium thiosulphate. The silver chloride dissolves. This solution depends on the

formation of the soluble double salt silver sodium thiosulphate. We could isolate this double salt from this solution, but it is much more easily prepared by the following method.

Sodium Thiosulphate

To sodium thiosulphate add silver nitrate drop by drop, preferably from a dropping funnel or a burette, stirring the mixed solutions during each addition. White silver thiosulphate is precipitated, but immediately dissolves. When a slight permanent precipitate is formed, filter and add an equal volume of alcohol to the filtrate (methylated spirit will do). A white precipitate of silver sodium thiosulphate is thrown down.

Silver thiosulphate itself is unstable, but gives us an easy method of making silver sulphide. Add enough silver nitrate to sodium thiosulphate to produce a copious white precipitate of silver thiosulphate. In a few seconds an almost startling series of colour changes commences.

Colour Changes

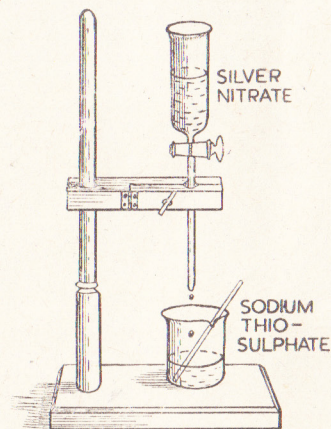
Cream first, then yellow, orange, brown and lastly black. Warm the black silver sulphide in the solution for a minute or two to complete the reaction, then filter and wash the sulphide prior to drying it. If you test the filtrate with blue litmus you will find it has become acid, the silver thiosulphate having split up into silver sulphide and sulphuric acid.

At the beginning of this article mention was made of sodium thiosulphate being used in the bleaching industry. It is not, however, used to bleach, but to remove excess chlorine from the fabric, which if left in would 'tender' the cloth, i.e., cause it to rot. Add some chlorine water to sodium thiosulphate. A precipitate of sulphur is formed and the odour of chlorine disappears. Because of this application sodium thiosulphate is called an 'anti-chlor'.

Most thiosulphates are soluble in water and those which are insoluble

will dissolve in solutions of the soluble ones, as we saw in the case of the silver salt. One of these insoluble ones is barium thiosulphate and which opens the door to further experiments.

Make strong solutions of barium chloride and sodium thiosulphate, mix them and filter off the white precipitate of barium thiosulphate, then dry it in a cool oven. Keep half for your chemical stock and make the other half into a thin paste with water. Add to this very gradually powdered iodine as long as it is decolourised.



Making silver sodium thiosulphate

If you have no solid iodine you can make some by passing chlorine into potassium iodide solution, washing the precipitated iodine by decantation and filtering it off. The resultant paste may be used instead of the dry solid.

Separation

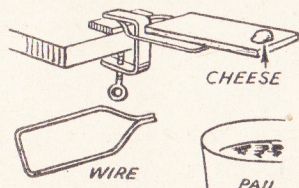
When a fresh addition of iodine is not decolourised, the reaction is complete, two new substances having been formed—barium iodide and barium tetrathionate. To separate them shake up the semi-solid white mass with methylated spirit. This dissolves out the barium iodide and excess iodine and leaves untouched the barium tetrathionate.

As the latter decomposes on warming with water it cannot be purified by recrystallisation; hence it better to wash it once or twice more with spirit and allow it to dry at room temperature spread on filter paper. The barium iodide may be recovered by evaporating off the spirit on the water bath until the mass is dry and white and no longer yellow with iodine.

In the last experiment we can show sodium thiosulphate to be a reducing agent. Add a solution of it drop by drop to copper sulphate. The solution becomes yellow, for the cupric salt has been reduced to a cuprous salt. Now boil it. Black cuprous sulphide is precipitated, which you can filter, wash and dry in the usual way for your chemical stock. (283)

Mouse Trap

OBTAIN a rectangular piece of three-ply board about 6ins. long and 2ins. wide. Next get a length of wire, and bend it as shown in Fig. (1). This should be fastened to the strip of



wood with 2 staples to allow the latter to swivel. A piece of cheese is tied to the hole in the end of the wood, and the trap is then secured to the table with a fretwork clamp and a small piece of wood, as shown in the detail. A bucket is half filled with water, and is placed on a chair, just under the end of the wood.

French Chalk Substitute

WHEN mending a puncture, to prevent the inner tube sticking to the tyre, french chalk is generally used, but when none of this is available, an excellent substitute is flour, which is applied in the same way as french chalk.

The tools and apparatus for ensuring good work in MAKING DOWEL JOINTS

AMONG the many forms of joint used by the amateur as well as by the professional carpenter, the dowelled joint is one of the most popular, and the reader will find many references to it in the various jobs mentioned in these pages. It is a really simple and straightforward means of joining thick parts of woodwork together, but, like everything else, it needs a little experience and must be done correctly and well.

Obviously, if good work such as pieces of furniture are being made, there is a good deal of strain on the joining pieces, and for that reason it is always essential to take care and note one or two important points.

Dowelling as most readers know, is a short round rod which is glued into holes bored in two pieces of wood which it is desired to join.

down to a piece of wood about 1in. thick, from which the middle has been cut, as can be seen in the broken-away portion of the diagram.

Supposing a $\frac{3}{8}$ in. dowel is to be made, the strip of wood to make it must be planed just under $\frac{1}{2}$ in. square and then shaped roughly down to octagonal shape. It is then stood over the $\frac{3}{8}$ in. hole in the plate and hammered through. The sharp edge of the metal will cut away the unwanted wood, and the strip emerges a round dowel ready for use.

As these dowels are never sunk into the wood more than 1in. or so, the rods need not be more than about 4ins. long when made. A convenient method of preparing the lengths ready for shaping the rods is to saw off blocks two or three times the required length, and to split them roughly into rectangular sticks.

rod of all diameters is sold ready to use by Hobbies Ltd.

If the rod is being bought for dowelling alone, it will be best to order it in short lengths, so it may the more easily be sent through the post. Obviously, a 3ft. length of $\frac{1}{4}$ in. round rod is likely to get damaged in the post unless supported by splines which in turn add to the cost.

Suitable Diameter

The diameter of the dowelling used should not be more than half the thickness of the board into which it is to be put. Its length, too, will be the same in both pieces, and it is not usual to sink it more than 1in. Dowelling, as well as the job on which it is being used, should be of seasoned material, for, obviously, if not, it will shrink as it dries and so break away from its surrounding work, and spoil the effect of the joint.

One great point to remember is that

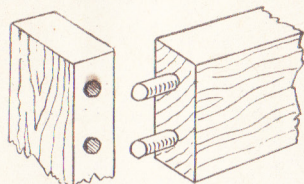


Fig. 1—End of dowelling

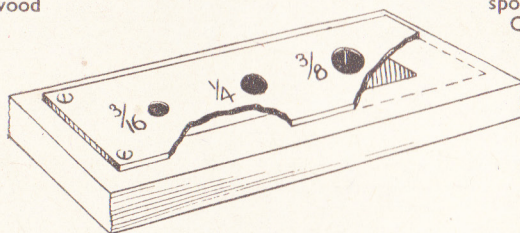


Fig. 2—Cut-away view of plate

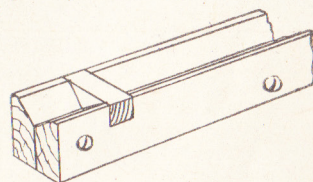


Fig. 3—A cutting tool

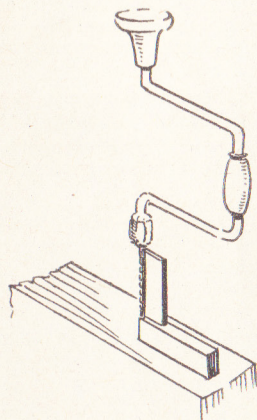


Fig. 4—An upright brace

The whole thing is shown quite clearly at Fig. 1, where a right angle joint is made with two short dowels. Formerly this dowelling had to be made as required, and even now some workers prefer to make their own from strips of square section wood.

Dowel Plate

A useful dowel plate is shown at Fig. 2, whereby this job can be done. This is a strong heavy metal plate in which are drilled two or three holes of the size likely to be required. The most popular are $\frac{3}{8}$ in., $\frac{1}{2}$ in. and $\frac{3}{4}$ in. for all ordinary work. This plate is screwed

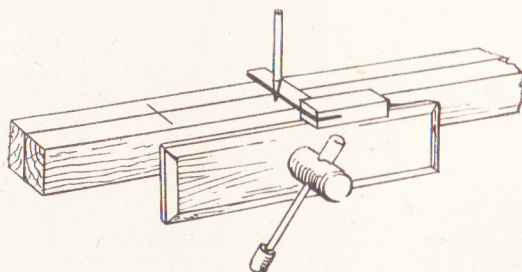


Fig. 5—Marking the work

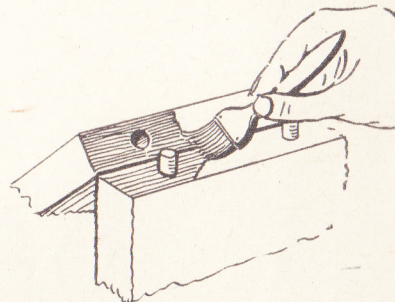


Fig. 7—Gluing the joint

These sticks are then planed, first to a square section, then into hexagonal section and finally circular.

A handy little tool for holding the sticks while planing is shown in Fig. 3. The dowels can finally be cut into

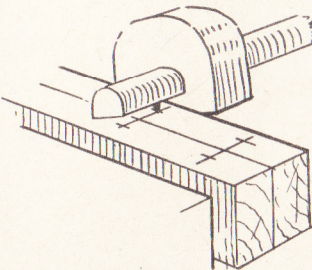


Fig. 6—The marking gauge

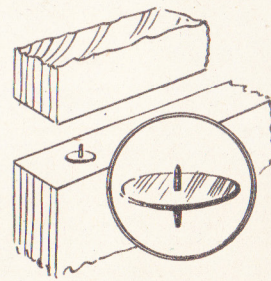


Fig. 8—Double-ended pin

lengths and the ends trimmed square. If the dowel is cut with a fine narrow groove from one end to the other, this allows for the escape of air and surplus glue when being driven in. This business of making dowels, however, is not now necessary to the amateur because dowel

the holes for the dowel must be bored accurately. They must be opposite each other on the two pieces of wood to be joined, and they must also be at right angles from each direction. That is, the brace must be held perfectly upright, as shown in Fig. 4.

This is not the easiest thing to do for the beginner especially, but a little practise will soon bring it about. The wood is put in a vice after being marked out, and a square can be put on it when the brace is in position to ensure a correct cut.

It may be found better, too, to stand at the end of the bench and work, instead of at the side.

Before this boring can be done, however, it is essential to mark out the wood so the dowel holes will come in their proper place directly opposite each other.

Joints

A good joint can only be made, of course, by accurately marking, and it must be done with square and gauge to ensure this. The dowel is driven in the centre of the thickness of the wood, and a line must, therefore, be marked down first to indicate this.

Get a marking gauge and see the point of it comes half way across the wood. It is best to put the two pieces in a vice and mark the position of the dowelling with pencil with a square, as shown in Fig. 5. Then take the marking gauge and cross these lines to indicate

the exact position where the centre of the bit will enter when the hole is to be bored for the dowelling, see Fig. 6.

Having got the positions, the next thing is to bore the holes, as already explained. The dowel will sink about $\frac{1}{16}$ in. into each piece, and it is advisable to have some form of knowing the depth when the brace and bit is used.

Height Gauge

It can easily be done by tying a piece of cotton round the bit at the required height. Or a small elastic band can be put round, or the number of turns of the bit counted to carry it to the right depth. It is advisable to carry the bit to a little lower than the actual depth of the dowel in order to clear away any roughness.

The top of the hole, too, should be very slightly countersunk. The depth of the hole in each part will, of course, be just over half the length of the actual dowel. The ends of this dowel can be slightly chamfered. Dip the end of the dowel in glue or coat it over and then tap it firmly into the holes of one piece. The other portion of the dowel is glued over and first piece of wood put over into its place.

Not only must the dowel itself be glued, of course, but the whole face of the wood which is meeting. The two parts are held as shown at Fig. 7.

The glue is then brushed on and the two parts put together. If possible put the completed joint in a vice or tie tightly with string until the glue has hardened.

Those who do a good deal of dowelling may find it worth getting a little thing called a marking pin, which enables the marking to be done easily and accurately. This little tool, Fig. 8, is like a drawing pin with a point projecting from both sides. Thus, when the position of the dowel is marked on one piece of wood, the pin is pressed into it.

The second piece of wood is then held in place and, by pressing down on the other piece, a true position is indicated by the second point of the pin, as clearly indicated in Fig. 8.

The whole process of dowelling is quite a simple job for the amateur to undertake, but the principal points to remember are, to mark out the wood carefully for the position of the dowels, to bore the holes straight and true, and to use good and well seasoned wood.

A STAMP COLLECTOR'S ALPHABET

A collection of terms which every philatelist should understand.

- A** AERO-PHILATELY. The study and collection of Air stamps.
- B** BISECT. A stamp cut in half for each part to be used at half value.
- C** CACHET. A mark impressed on a card or envelope to show the special circumstances in which it was posted, e.g., on some important exploration expedition.
- D** DEMONETISED. A term applied to obsolete stamps no longer valid for use in the post.
- E** EXPERTISE. The expression of an opinion regarding the genuineness or value of a stamp by a Philatelic expert.
- F** FISCAL PHILATELY. The collection of stamps used for revenue other than postage.
- G** GOVERNMENT IMITATIONS. Copies of obsolete stamps made by government authority to provide specimens for exhibitions, etc., when the original materials and dies are no longer available.
- H** HINGE. A small piece of gummed paper used for mounting stamps in albums.
- I** INVERTED. Upside down. (Stamps printed in two im-

pressions sometimes have the centre inverted as compared to the rest of the design).

- J** JUBILEE LINES. Lines of colour found round the edges of sheets of many British and Colonial stamps.
- K** KEY PLATE. A printing plate used to provide the common design for a series of stamps, blank spaces being left for the addition of figures and lettering.
- L** LOCALS. Stamps whose franking power is limited to a particular district or route.
- M** MIRROR PRINT. A type of error in which the design on a stamp is printed in reverse, as though seen in a mirror.
- N** NEWSPAPER STAMPS. Stamps issued in some countries for use on newspaper mail only.
- O** ODONTOMETRE. A gauge for measuring perforations.
- P** POCHETTES. Transparent envelopes made to hold one stamp each.
- Q** QUARTZ LAMP. A violet ray lamp used to detect alterations on stamps.
- R** ROULETTE. A form of perforation which is merely

pricked in the paper without punching the holes out.

- S** SUNDAY LABEL. A small label at the base of some Belgian stamps giving instructions not to deliver on Sunday.
- T** TÊTE BÊCHE. An unsevered pair of stamps from a sheet in which one is printed upside down as compared to the other.
- U** U.P.U. Abbreviation for 'Universal Postal Union' which regulates international relationships between Postal authorities of the world.
- V** VARIETY. A stamp containing some small variation from normal not sufficiently important to be classed as an 'Error'.
- W** WATERMARK DETECTOR. A black slab or tray for examining watermarks with the application of benzine.
- X** XLOL. A spirit used for mixing photogravure inks used in printing some stamps.
- Y** YIN YANK. An oriental symbol found in stamps of Korea and Mongolia.
- Z** ZERO STAMPS. Spanish stamps numbered at the back 000,000. (274)



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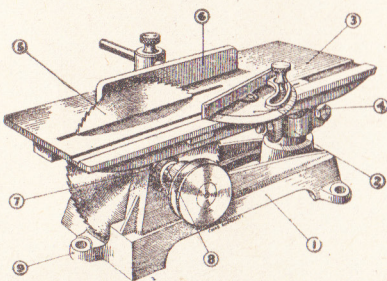
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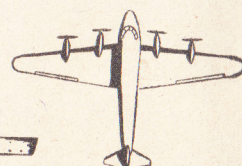
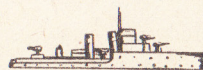
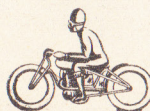
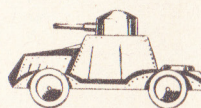
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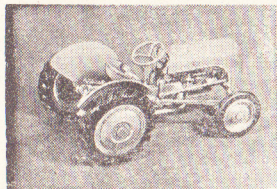


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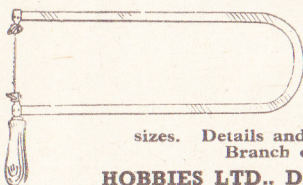
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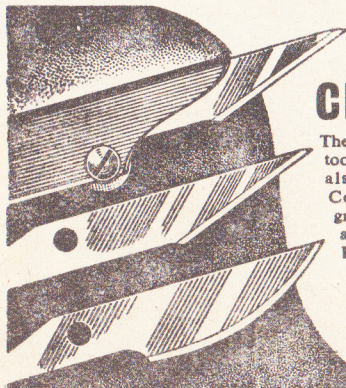


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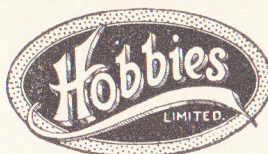
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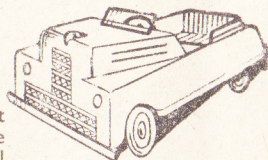
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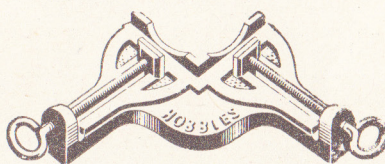
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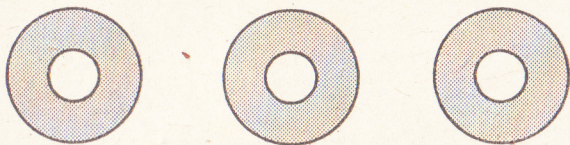
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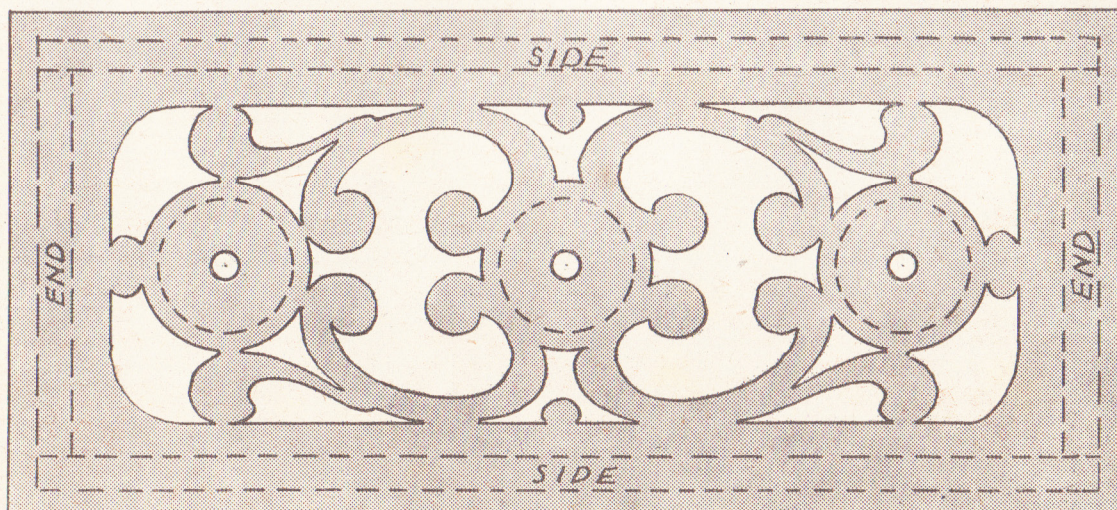
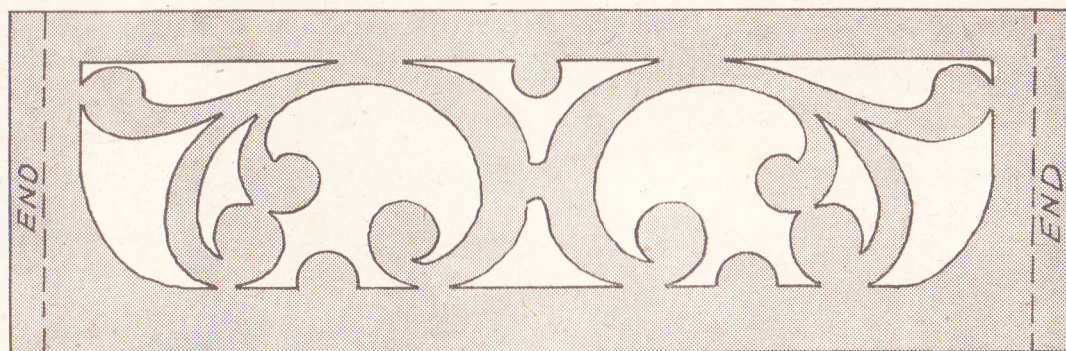
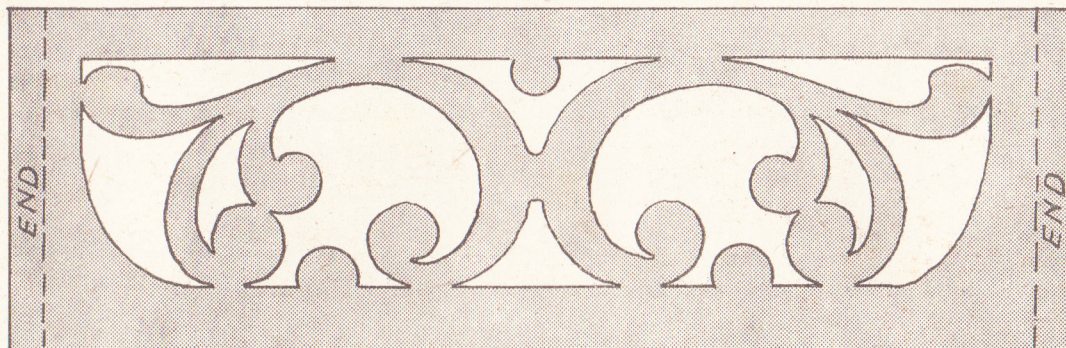
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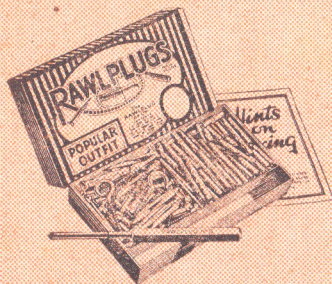


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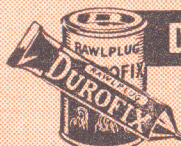
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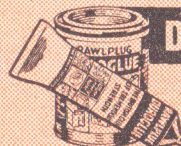
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